Patent Claims

1. Device for the simultaneous and qualitative or quantitative determination of a plurality of analytes in a liquid sample, comprising a membrane (2) with

- an application zone (5) for the application of the liquid sample,
- at least one group of at least two indicator zones, which are able to interact with the analyte(s) and
- at least one absorption region (3) which takes up the liquid after having passed the indicator zones

wherein the indicator zones are located between the application zone (5) and the absorption region (3), characterized in that
the flow directions from the application zone (5) through the respective indicator zones of a group towards an absorption region (3) (flow tracks) are substantially parallel and that at least two different flow tracks are present.

2. Apparatus according to claim 1, wherein the indicator zones are so arranged that the test liquids for any one flow track flow through not more than one indicator zone.

3. Device according to claim 1, wherein the indicator zones are arranged in a diagonal V-, W-, M-, N-shaped or linear row.

4. Device according any one of claims 1 to 3, wherein the indicator zones comprise antibodies or antibody fragments or lectines, antigens or antigen epitopes and/or cells or cell fragments.

5. Device according to any one of claims 1 to 7, wherein the indicator zones comprise in particular anti-A, B, -HB, -D, -D, -C, -c, E, -e, -Cw and/or K-antibodies or antibody fragments.

6. Device according to any one of claims 1 to 5, wherein all the membranes (2) preferably consist of polyethylene, nitrocellulose or nylon.

7. Device according to any one of claims 1 to 6, wherein downstream of the application zone (5) and upstream of the indicator zones at least one sealing element (4) is provided on the membrane (2).

8. Device according to any one of claims 1 to 7, wherein the components of the device have been applied onto a support layer (1) for mechanical reinforcement.

9. Device according to any one of claims 1 to 8, wherein the components of the device are integrated in a casing.

10. Use of the device according to any one of claims 1 to 9 for the analysis of blood, in particular for the determination of blood group antigens or antigen epitopes.

11. Use of the device according to any one of claims 1 to 10 for the analysis of blood, in particular for the simultaneous determination of A-, B-, AB-, D-, C, c-, E-, e, Cw - and/or K-blood group antigens or antigen epitopes.

12. Method for the determination of a plurality of analytes or their derivatives in a liquid sample, comprising:

the application of the sample onto the application zone (5) of a membrane (2) of the device according to any one of the preceding claims 1 to 8, wherein this sample is present in adequate amounts in order to induce the test liquid to flow in the direction of the absorption region (3) through the indicator zones and to induce the analytes or their derivatives in the test liquid to form a complex in the indicator zones.

13. Method according to claim 12, wherein the analytes are blood group antigens or antigen epitopes.

14. Method according to claim 12 or 13, wherein the analytes in particular include A-, B-, AB-, D-, C, c-, E-, e, Cw - and/or K-blood group antigens or antigen epitopes.

15. Method according to any one of claims 12 to 14, wherein the analytes A-, B-, AB-, D-, C, c-, E-, e, Cw - and/or K-blood group antigens or antigen epitopes are detected simultaneously.

16. Method according to any one of claims 12 to 15, wherein the indicator particles are erythrocytes.

17. Method according to any one of claims 12 to 16, wherein the membrane (2) after the application of indicator particles is rinsed.

18. Method according to claim 17 wherein the rinsing liquor is preferably hypo-osmotic.

19. Method according to any one of claims 12 to 18, wherein the liquid sample is composed of blood or blood components, preferably of complete blood, erythrocyte concentrate or test liquid such as control blood.